Seasonal Pools in the Mid-Atlantic Region

Building a Framework for Conservation

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Background

Seasonal pools (i.e., vernal pools, temporary wetlands) provide critical habitat to seven species of mole salamanders (*Ambystoma spp.*), the wood frog (*Rana sylvatica*), the eastern spadefoot (*Scaphiopus holbrookii*), and fairy shrimp (*Eubranchipus spp., Streptocephalus sealii*) in the mid-Atlantic region.

The same qualities that make seasonal pools uniquely valuable to wildlife render them especially vulnerable to human disturbance: their small size, isolation, and impermanent waters. Seasonal pools are experiencing ongoing pressures from land development.

Major obstacles to management include: a shortage of information on abundance and distribution of seasonal pools in the mid-Atlantic region, low or nonexistent level of protection from state or federal regulations, and a lack of awareness regarding the importance of seasonal pools to biodiversity support.

Projects

Upcoming Publication

The Environmental Protection Agency is publishing a manual this spring, entitled “An Introduction to Mid-Atlantic Seasonal Pools,” which will provide a framework for seasonal pool management in the mid-Atlantic region. The manual creates a definition for seasonal pools, introduces a classification system for pools according to hydrology and vegetation, selects and describes seasonal pool indicator species, analyzes threats to seasonal pools and their wildlife, and makes recommendations for seasonal pool conservation and management.

Seasonal Pool Construction Workshop

In the fall of 2004, the U.S. EPA (MAIA, Region III, and Office of Science Policy), M-NCPPC, and the USDA Forest Service sponsored a workshop to design and build a constructed seasonal pool. The workshop initiated an exchange of ideas and opened channels of communication between professionals from a wide variety of backgrounds (including local and state government, federal agencies, nongovernmental organizations, and private firms). Although protection of intact habitats remains the most important priority of seasonal pool conservation efforts, construction and restoration of pools may also be a complementary management tool.

Upcoming Workshop

Regional Science Workshop on Vernal Pools and Ephemeral Streams (Winter 2006)

Conservation Challenges

Direct Loss of Seasonal Pools

The direct loss of seasonal pools due to their draining, filling, and dredging in association with human activities

Terrestrial Habitat Loss and Fragmentation

Changes in land-use in the mid-Atlantic region and their consequences for wildlife habitat, landscape connectivity, and hydrology

Other Conservation Challenges

Biological introductions and removals, mosquito control practices, amphibian diseases, acid precipitation and metals, and climate change

Recommendations

Education and Research on Seasonal Pools

Establish Scientific and Management Dialogue
Increase Public Awareness
Raise Level of Knowledge

Inventory of Seasonal Pools

Locate and Document Seasonal Pools
Monitor Seasonal Pools

Landscape-Level Planning and Management

Acquisition and Protection of Intact Habitats
Best Management Practices
Best Development Practices
Transportation Planning
Regulatory Tools

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